Listing of All Claims Including Current Amendments

1-19. (cancelled).

20. (new) A method for providing images of a viewed surface to a user, the method comprising:

positioning an endoscope in a first viewing position relative to a real surface;

using the endoscope to acquire an image of the real surface from the first viewing position;

providing a virtual surface approximating the topography of the real surface;

mapping the acquired image onto the virtual surface;

establishing a second viewing position relative to the real surface different than the position of the endoscope;

determining position data indicating the difference between the position of the endoscope and the second viewing position;

using the mapped virtual surface and the position data to render an image representing a view of the real surface from the second position; and

providing the rendered image to the user.

21. (new) The method of claim 20, wherein at least the steps of using the endoscope to acquire an image, mapping the acquired image onto the virtual surface, and using the

mapped virtual surface and the position data to render an image are repeated when the endoscope is moved from the first viewing position to another position relative to the real surface.

22. (new) The method of claim 20, wherein the image is one of a series of video images.

23. (new) The method of claim 20, wherein the topographical approximation is based on volumetric scan data.

24. (new) The method of claim 20, wherein the topographical approximation is based on stereo imaging.

25. (new) The method of claim 20, wherein the second viewing position represents the position of a user.

26. (new) The method of claim 20, wherein the virtual surface represents an anatomical object.

27. (new) The method of claim 20, wherein the virtual surface is planar.

28. (new) The method of claim 20, wherein the position of the endoscope is represented by a first viewing set including a scope viewing point, a scope viewing direction, and a scope orientation relative to the actual surface, and the second position is represented by a second viewing set including a virtual viewing point, a virtual viewing direction, and a virtual orientation corresponding to the second position.

29. (new) The method of claim 20, wherein a virtual viewing point is arranged in a manner generally corresponding to an endoscopic viewing point.

30. (new) The method of claim 20, wherein a virtual viewing point is arranged in a manner generally corresponding to an actual viewing point of a user.

31. (new) The method of claim 20, wherein a virtual viewing direction is directed in a manner generally corresponding to an actual viewing direction of a user.

32. (new) The method of claim 20, wherein a virtual viewing orientation is oriented in a manner generally corresponding to an actual viewing orientation of a user.

33. (new) The method of claim 20, wherein the image is mapped onto the virtual surface according to a mapping that adjusts for distortion.

34. (new) An apparatus for providing images of a viewed surface to a user, comprising:

an endoscope that captures an image of a real surface when in a first position relative to the real surface;

a processor that creates a virtual surface approximating the topography of the real surface, maps the image acquired by said endoscope onto the virtual surface, determines position data indicating the difference between the first position and a second position relative the real surface different than the first position, and uses the mapped virtual surface and the position data to render an image representing a view of the real surface from the second position; and

a monitor in communication with said computer that displays the rendered image.

35. (new) The apparatus of claim 34, wherein, each time the endoscope acquires a new image, the processor maps the new image onto the virtual surface and uses the mapped virtual surface and the position data to render another image.

36. (new) The method of claim 36, wherein the image is one of a series of video images.

37. (new) A method for providing images of a viewed surface to a user, the method comprising:

inserting an endoscope into a cavity;

moving the endoscope into a first viewing position relative to a real surface;

using the endoscope to acquire an image of the real surface from the first viewing position;

providing a virtual surface approximating the topography of the real surface;

mapping the acquired image onto the virtual surface;

establishing a second viewing position representing the position of a user relative to the real surface;

determining position data indicating the difference between the position of the endoscope and the position of the user;

using the mapped virtual surface and the position data to render an image representing a view of the real surface from the position of the user; and

providing the rendered image to the user.

38. (new) The method of claim 36, wherein at least the steps of using the endoscope to acquire an image, mapping the acquired image onto the virtual surface, and using the mapped virtual surface and the position data to render an image are repeated when the endoscope is moved from the first viewing position to another position relative to the real surface.

39. (new) The method of claim 36, wherein the image is one of a series of video images.